

## CLAIMS

1. A sintering method of a porous glass base material for sintering a rod-like porous glass base material by hanging and moving the rod-like porous glass base material through a heating furnace, wherein

the porous glass base material is lowered into a heating furnace heated to a sintering temperature, and

after every part of the porous glass base material is moved through a preheated region extending from an upper edge of an insulating member to an upper edge of a heater in a heating furnace body in 4.5 hours or longer, the porous glass base material is sintered by the heater to be vitrified into a transparent glass.

2. A sintering apparatus of a porous glass base material for sintering a rod-like porous glass base material by hanging and moving the rod-like porous glass base material through a heating furnace, wherein

a length of an insulating member is set such that every part of a porous glass base material is lowered into a heating furnace and moved through a preheated region extending from an upper edge of the insulating member to an upper edge of a heater in a heating furnace body in 4.5 hours or longer.